



SIRIUS, COMPACT STARTER,  
DIRECT STARTER 690 V, 24 V AC/DC,  
50 ... 60 HZ, 0.32 ... 1.25 A, IP20,  
CONNECTION MAIN CIRCUIT: SCREW TERMINAL,  
CONNECTION AUXILIARY CIRCUIT: SCREW TERMINAL

### General technical data:

|                                                    |    |                                                 |
|----------------------------------------------------|----|-------------------------------------------------|
| product brand name                                 |    | SIRIUS                                          |
| Product designation                                |    | compact starter                                 |
| Design of the product                              |    | direct starter                                  |
| Trip class                                         |    | CLASS 10 and 20 adjustable                      |
| Product function                                   |    |                                                 |
| • control circuit interface to parallel wiring     |    | Yes                                             |
| • bus-communication                                |    | No                                              |
| • short circuit protection                         |    | Yes                                             |
| • control circuit interface with IO link           |    | No                                              |
| Type of assignment                                 |    | continuous operation according to IEC 60947-6-2 |
| Protection class IP                                |    | IP20                                            |
| Degree of pollution                                |    | 3                                               |
| mounting position / recommended                    |    | vertical, on horizontal standard mounting rail  |
| Installation altitude / at a height over sea level |    |                                                 |
| • maximum                                          | m  | 2,000                                           |
| Ambient temperature                                |    |                                                 |
| • during storage                                   | °C | -55 ... +80                                     |
| • during operating                                 | °C | -20 ... +60                                     |
| • during transport                                 | °C | -55 ... +80                                     |

|                                                                                                                                                                                                           |             |                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------|
| <b>Relative humidity</b><br>• during operating phase                                                                                                                                                      | %           | 10 ... 90                                                                        |
| <b>Resistance against shock</b>                                                                                                                                                                           |             | a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes                   |
| <b>Resistance against vibration</b>                                                                                                                                                                       |             | f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s <sup>2</sup> ; 10 cycles |
| <b>Impulse voltage resistance / rated value</b>                                                                                                                                                           | V           | 6,000                                                                            |
| <b>Field-bound parasitic coupling</b><br>• according to IEC 61000-4-3                                                                                                                                     |             | 10 V/m                                                                           |
| <b>Insulation voltage / rated value</b>                                                                                                                                                                   | V           | 690                                                                              |
| <b>Conductor-bound parasitic coupling conductor-earth SURGE</b><br>• according to IEC 61000-4-5                                                                                                           |             | 4 kV main contacts, 2 kV auxiliary contacts                                      |
| <b>Conductor-bound parasitic coupling conductor-conductor SURGE</b><br>• according to IEC 61000-4-5                                                                                                       |             | 2 kV main contacts, 1 kV auxiliary contacts                                      |
| <b>Conductor-bound parasitic coupling BURST</b><br>• according to IEC 61000-4-4                                                                                                                           |             | 4 kV main contacts, 2 kV auxiliary contacts                                      |
| <b>Maximum permissible voltage for safe disconnection</b><br>• between main circuit and auxiliary circuit<br>• between control and auxiliary circuit<br>• between auxiliary circuit and auxiliary circuit | V<br>V<br>V | 400<br>300<br>250                                                                |
| <b>Reference code</b><br>• according to DIN 40719 extended according to IEC 204-2 / according to IEC 750<br>• according to DIN EN 61346-2                                                                 |             | Q<br>Q                                                                           |

#### Main circuit:

|                                                                                                                                                    |                |                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------|
| <b>Operating voltage / at AC-3 / rated value</b><br>• maximum                                                                                      | V              | 690                   |
| <b>Number of poles / for main current circuit</b>                                                                                                  |                | 3                     |
| <b>Adjustable response current</b><br>• of the current-dependent overload release                                                                  | A              | 0.32 ... 1.25         |
| <b>Formula for making capacity limit current</b>                                                                                                   |                | 38.4 x I <sub>e</sub> |
| <b>Formula for interruption capacity limit current</b>                                                                                             |                | 32 x I <sub>e</sub>   |
| <b>Emitted mechanical power / for 4-pole three-phase motor</b><br>• at 400 V / rated value<br>• at 500 V / rated value<br>• at 690 V / rated value | kW<br>kW<br>kW | 0.37<br>0.55<br>0.75  |
| <b>Service power / at AC-3 / at 400 V / rated value</b>                                                                                            | W              | 370                   |
| <b>Frequency of operation / at AC-41 / according to IEC 60947-6-2 / maximum</b>                                                                    | 1/h            | 750                   |
| <b>Frequency of operation / at AC-43 / according to IEC 60947-6-2 / maximum</b>                                                                    | 1/h            | 250                   |

|                                                      |     |            |
|------------------------------------------------------|-----|------------|
| <b>Off-load operating frequency</b>                  | 1/h | 3,600      |
| <b>Mechanical operating cycles as operating time</b> |     |            |
| • of the main contacts / typical                     |     | 10,000,000 |
| • of the auxiliary contacts / typical                |     | 10,000,000 |
| • of the signal contacts / typical                   |     | 10,000,000 |

#### Control circuit:

|                                   |    |     |
|-----------------------------------|----|-----|
| <b>Type of voltage</b>            |    | AC  |
| <b>Control supply voltage / 1</b> |    |     |
| • for DC                          |    |     |
| • rated value                     | V  | 24  |
| • at 50 Hz / for AC               |    |     |
| • rated value                     | V  | 24  |
| • at 60 Hz / for AC               |    |     |
| • rated value                     | V  | 24  |
| <b>Holding power</b>              |    |     |
| • for AC / maximum                | W  | 2.8 |
| • for DC / maximum                | W  | 2.9 |
| <b>Switch-off delay time</b>      | ms | 50  |
| <b>Start-up delay time</b>        | ms | 70  |

#### Auxiliary circuit:

|                                                                                                      |   |         |
|------------------------------------------------------------------------------------------------------|---|---------|
| <b>Product extension</b>                                                                             |   |         |
| • auxiliary switch                                                                                   |   | Yes     |
| <b>Number of NC contacts</b>                                                                         |   |         |
| • for auxiliary contacts                                                                             |   | 1       |
| <b>Number of NO contacts</b>                                                                         |   |         |
| • for auxiliary contacts                                                                             |   | 1       |
| • of the non-delayed short-circuit release / for alarm contact                                       |   | 1       |
| <b>Number of changeover contacts / of the current-dependent overload release / for alarm contact</b> |   | 1       |
| <b>Operating current / of the auxiliary contacts / at AC-12</b>                                      |   |         |
| • maximum                                                                                            | A | 10      |
| <b>Electrical switching cycle as operating time / of the auxiliary contacts</b>                      |   |         |
| • at AC-15 / at 6 A / at 230 V / typical                                                             |   | 500,000 |
| • at DC-13 / at 6 A / at 24 V / typical                                                              |   | 100,000 |
| <b>Electrical switching cycle as operating time / of the signal contacts</b>                         |   |         |
| • at AC-15 / at 6 A / at 230 V / typical                                                             |   | 500,000 |
| • at DC-13 / at 6 A / at 24 V / typical                                                              |   | 100,000 |

**Short-circuit:****Design of the fuse link / for short-circuit protection of the auxiliary switch**

- required

fuse gL/gG: 10 A

**Installation/mounting/dimensions:****Mounting type**

screw and snap-on mounting

**Width**

mm

45

**Height**

mm

170

**Depth**

mm

165

**mounting position**

any

**Connections:****Product function**

- removable terminal for main circuit
- removable terminal for auxiliary and control circuit

Yes

Yes

**Design of the electrical connection**

- for main current circuit
- for auxiliary and control current circuit

screw-type terminals

screw-type terminals

**Type of the connectable conductor cross-section**

- for main contacts
  - solid
  - finely stranded
    - with conductor end processing
- for auxiliary contacts
  - solid
  - finely stranded
    - with conductor end processing
- for AWG conductors
  - for main contacts
  - for auxiliary contacts

2x (1.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup>2x (1.5 ... 6 mm<sup>2</sup>)0.5 ... 4 mm<sup>2</sup>, 2x (0.5 ... 2.5 mm<sup>2</sup>)0.5 ... 2.5 mm<sup>2</sup>, 2x (0.5 ... 1.5 mm<sup>2</sup>)

2x (16 ... 10), 1x 8

2x (20 ... 14)

**Certificates/approvals:****Verification of suitability**

IEC / EN 60947-6-2

## General Product Approval

## EMC

## Functional Safety / Safety of Machinery



CCC



CSA



UL



C-TICK



VDE

## Test Certificates

[Type Test  
Certificates/Test  
Report](#)

## Shipping Approval



LRS



PRS



RINA



RMRS

## other

[Declaration of  
Conformity](#)

[other](#)

[Environmental  
Confirmations](#)

## UL/CSA ratings:

### yielded mechanical performance (hp) / for three-phase squirrel cage motors

- at 460/480 V / rated value
- at 575/600 V / rated value

hp

0.5

hp

0.5

### Full-load current (FLA) / for 3-phase motor

- at 480 V / rated value
- at 600 V / rated value

A

1.25

A

1.25

### Contact rating designation / for auxiliary contacts / according to UL

contacts 21-22, 13-14, 43-44 Q600 / A600, contacts  
77-78 R300 / B300, contacts 95-96-98 R300 / D300

## Reliability figures:

### B10 value

3,000,000

### Proportion of dangerous failures

%

50

### Proportion of dangerous failures / with low demand rate / according to SN 31920

%

40

### Protection against electrical shock

finger-safe

### Failure rate [FIT] / with low demand rate / according to SN 31920

FIT

100

## Further information:

### Information- and Downloadcenter (Catalogs, Brochures,...)

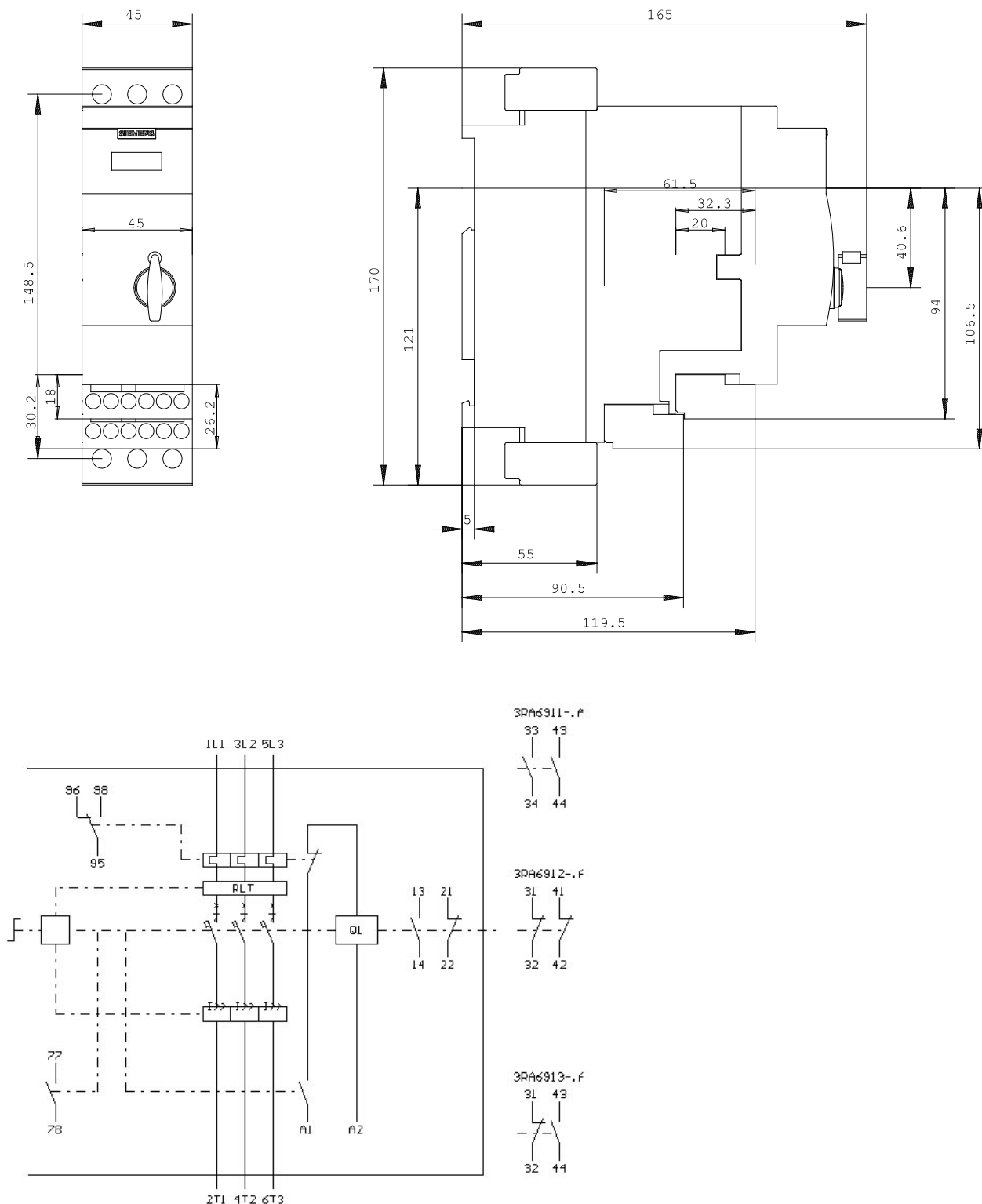
<http://www.siemens.com/industrial-controls/catalogs>

### Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

### Cax online generator:

<http://www.siemens.com/cax>



last change:

Jun 16, 2014